

CHARLENE HANLON

Personal Information

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Citizenship: Canadian

Employment

Assistant Professor	Reproductive Physiologist Department of Poultry Science, Auburn University Auburn, AL, USA.	<i>Sept 2022-Present</i>
Post-Doc Scholar	Reproductive Physiologist Department of Animal Bioscience, University of Guelph Guelph, ON, Canada	<i>2020-2022</i>

Education

PhD	Animal Physiology Department of Animal Bioscience, University of Guelph <i>Dissertation: Has the intensive genetic selection of commercial layer chickens impacted the control of the reproductive axis?</i>	<i>2015-2020</i>
BSc	Animal Biology Department of Animal Bioscience, University of Guelph	<i>2011-2015</i>

Teaching

Spring 2026

1. POUL 3150: Poultry Physiology (4 credits)
2. POUL 3060: Poultry Reproduction (3 credits)

Fall 2025

3. POUL 3030: Commercial Poultry Production (4 credits)
4. POUL 7970: Applied Commercial Poultry Production (3 credits)

Spring 2025

5. POUL 1000: Introduction to Poultry Science (3 credits; co-taught)
6. POUL 3060: Poultry Reproduction (3 credits)

Fall 2024

7. POUL 1000: Introduction to Poultry Science (3 credits; co-taught)

Summer 2024

8. POUL 7970: Broiler Breeder Management (3 credits)

Spring 2024

9. POUL 1000: Introduction to Poultry Science (3 credits; co-taught)
10. POUL 3060: Poultry Reproduction (3 credits)

Fall 2023

11. POUL 1000: Introduction to Poultry Science (3 credits; co-taught)

Spring 2023

12. POUL 1000: Introduction to Poultry Science (3 credits; solo taught)

13. POUL 3060: Poultry Reproduction (3 credits)

Mentoring

Graduate Students – In Progress

a. *Candidate as Major Advisor*

1. **Olivia McGuire** – MSc Poultry Science. Anticipated graduation: May 2026 (Major Advisor).
Thesis: The impact of synchronizing photoperiod with body weight and metabolic thresholds to optimize sexual maturation in cage-free layers.
2. **Kristian Almendares** – MSc Poultry Science. Anticipated graduation: August 2027 (Major Advisor).
Thesis: Metabolic and lipidomic responses to feeding regimens and their impact on hatchability in broiler breeders.
3. **Kylie Sizemore** – PhD Poultry Science. Anticipated graduation: December 2026 (Major Advisor).
Thesis: Hatchery sanitation methods to improve hatchability rates in commercial settings.
4. **J. Wesley Rogers** – PhD Poultry Science. Anticipated graduation: May 2027 (Major Advisor).
Thesis: Assessing Muscle Satellite Cell Function in the Broiler Chicken Wooden Breast Myopathy.
5. **Jorge Luis Sandoval Escobar** – PhD Poultry Science. Anticipated graduation: May 2026 (Major Advisor).
Thesis: Role of Muscle Stem Cells in the Wooden Breast Chicken Meat Quality Defect.
6. **Patricia Quino** – MSc Poultry Science. Anticipated graduation: December 2028 (Major Advisor).
Thesis: Reproductive Success of Broiler Breeders: Investigating the Relationship Between Metabolic Tissues, Neuroendocrine Regulation, and Sexual Maturation.
7. **Nicole Dundur** – MSc Poultry Science. Anticipated graduation: December 2028 (Major Advisor).
Thesis: The Timing of Ovulation in Broiler Breeder hens and its impact on egg quality and hatchability.

Visiting Research Scholars

1. **Kristian Almendares** – March 2024 to August 2025
2. **Patricia Quino** – May 2024 to December 2025
3. **Nicole Dundur** – August 2025 to December 2025

Undergraduate Research Assistants

a. *Current*

1. **Morgan Studdard**
2. **Elijah Griggs**
3. **Ruby Hudson**
4. **Phoebe Pittard**
5. **Caroline Hartley**

b. *Past*

1. **Colt Hunter** (Current Role: GP Flock Supervisor, Aviagen)
2. **Kaleigh Backstrom** (Current Role: AU Vet School)
3. **Moree McDonald** (Current Role: AU Poultry Science Ambassador)

4. **Emily Ivey** (Current Role: APEA Internship)

Graduate Students – Completed

a. *Candidate as Major Advisor*

1. **Madison Berger** – MSc Poultry Science. Anticipated graduation: December 2025 (Major Advisor).
Thesis: The Impact of Restricted Feeding Regimens on Reproductive Capacity and Successful Fertilization in Broiler Breeder Flocks.
2. **Ileana Maria Berganza Portillo** – MSc Food Science. Anticipated graduation: December 2025 (Major Advisor).
Thesis: Instrumental color of insect-based jerky-style pet treats made with different inclusions of crickets (*Acheta domesticus*) and chicken liver.

b. *Candidate as Committee Member*

1. **Leticia Orellana Galindo** – MSc Poultry Science (Dr. K. Macklin, major advisor)
2. **Jorge Enrique Banegas Duron** – MSc Poultry Science (Dr. J. Starkey, major advisor)
3. **Orlando Benjamin Fiallos Soto** – M. Ag. Poultry Science (Dr. J. Starkey, major advisor)
4. **J. Wesley Rogers** – MSc Poultry Science (Dr. J. Starkey, major advisor)
5. **Madelyn Jennings** – MSc Poultry Science (Dr. D. Bourassa, major advisor)
6. **Juan Jose Barberena Baltodano** – MSc Poultry Science (Dr. J. Starkey, major advisor)
7. **Marcela Quino Gutierrez** – MSc Poultry Science (Dr. B. Baker-Cook, major advisor)

c. *University Reader*

1. **Victoria Coutts** – PhD Biological Sciences (Dr. H. Wada, major advisor)

Publications

Book Chapters

1. Bédécarrats, G.Y. and **Hanlon, C.** 2017. Effect of lighting and photoperiod on chicken egg production and quality. In: Egg Innovations and strategies for improvement. Academic Press. Cambridge, Massachusetts, United States. pages: 30

Review Articles

2. Linhoss, JE., Falana, O., Davis, JD., Purswell, JL., Edge, CM., Olanrewaju, HA., Baker-Cook, BI., **Hanlon, C.** 2025. An updated review on the effect of lighting on broilers and the environment of commercial houses. *World's Poultry Science Journal*.
3. Farag, HI., Templeman, JR., **Hanlon, C.**, Joshua, J., Koch, TG., Niel, L., Shoveller, A., Bédécarrats, GY., Wilcockson, D., Murphy, BA., and Martino, TA. 2024. One Health: Circadian Medicine for Animals and Humans. *Journal of Biological Rhythms*. 39 (3): 237-269.
4. **Hanlon, C.** Ziezold, C. and Bédécarrats, G.Y. 2022. The Diverse Roles of 17 β -Estradiol in Non-Gonadal Tissues and Its Consequential Impact on Reproduction in Laying and Broiler Breeder Hens. *Frontiers in Physiology*. 13:942790. doi: 10.3389/fphys.2022.942790.
5. Bédécarrats, GY, **Hanlon, C.**, and Tsutsui, K. 2022. Gonadotropin inhibitory hormone (GnIH) and its receptor, potential key to the integration and coordination of metabolic status and reproduction. *Frontiers in Endocrinology*. 12: 781543. doi: 10.3389/fendo.2021.781543.

6. **Hanlon, C.**, Ramachandran, R., Zuidhof, M., and Bédécarrats, GY. 2020. Should I Lay or Should I Grow: Photoperiodic Versus Metabolic Cues in Chickens. *Frontiers in Physiology*. 11: 707. doi: 10.3389/fphys.2020.00707.

Journal Articles

7. Rentsch, A., Gautamadasa, S., **Hanlon, C.**, and Bédécarrats, GY. 2026. Research Note: Transient Behavioral Effects of Feed Restriction in a White Feathered Laying Hen Pullet Strain - Assessment of Frustration and Locomotor Energy Expenditure. *Poultry Science*.
8. Takeshima, K., Zuidhof, MJ., **Hanlon, C.**, and Bédécarrats, GY. 2025. Impact of daytime and supplemental feeder light spectrum on female broiler breeder growth and reproductive performance. *Poultry Science*. 106074.
9. Sroda, LR., Davis, JD., Diehl, K., Edge, CM., Berger, MR., Elliott, KEC., Flack, B., and **Hanlon, C.** 2025. Validation of a photoelectric sensor system to detect oviposition timing in individually caged broiler breeder hens. *Poultry Science*. 195932.
10. Brady, K., **Hanlon, C.**, and Long, J. 2024. Turkey hen sperm storage tubule transcriptome response to artificial insemination and the presence of semen. *Frontiers in Physiology*. 14: 1305168.
11. Bahry, MA., **Hanlon, C.**, Ziezold, CJ., Schaus, S., and Bédécarrats, G.Y. 2023. Impact of growth trajectory on sexual maturation in layer chickens. *Frontiers in Physiology*.
12. **Hanlon, C.**, Zuidhof, MJ., Rodriguez, A., Takeshima, K., and Bédécarrats, GY. 2023. Continuous exposure to red light induced photorefractoriness in broiler breeder pullets. *Poultry Science* 102: 102542.
13. **Hanlon, C.**, Takeshima, K., Kiarie, E.G., and Bédécarrats, GY. 2022. Bone and eggshell quality throughout an extended laying cycle in three strains of layers spanning 50 years of selection. *Poultry Science* 101: 101672.
14. **Hanlon, C.**, Takeshima, K., and Bédécarrats, GY. 2021. Changes in the control of the hypothalamic-pituitary gonadal axis across three differentially selected strains of laying hens (*Gallus gallus domesticus*). *Frontiers in Physiology*. 12:651491 doi: 10.3389/fphys.2021.651491
15. Takeshima, K., **Hanlon, C.**, Sparling, B., Korver, D.R., and Bédécarrats, G.Y. 2019. Spectrum lighting during pullet rearing and its impact on subsequent production performance in layers. *Journal of Applied Poultry Research*. 1-17.

Conference Proceedings

(Abstract-Reviewed)

1. Li, K., **Hanlon, C.**, and Diehl, K. Impact of Restricted Feeding Regimens on Broiler Breeder Pituitary Gene Expression during Rearing. Plant and Animal Genome Conference. San Diego, California, USA.
2. McGuire, O^{G*}, Rentsch, AK., Bédécarrats, GY., **Hanlon, C.** 2026. Effects of mild feed restriction on energy expenditure for reproduction and spatial distribution in cage-free pullets. International Poultry Scientific Forum. Atlanta, Georgia, USA.

3. Berger, M^{G*}, Diehl, K., Flack, B., Quino, P^{VRS*}, McGuire, O^{G*}, Almendares, K^{VRS*}, and **Hanlon, C.** 2026. Impact of Feeding Regimens on Growth, Reproductive Development, and Individual Performance of Broiler Breeder Males. International Poultry Scientific Forum. Atlanta, Georgia, USA.
4. Quino, P., Quino, M., Almendares, K., Dundur, N., Berger, M., McGuire, O., Davis, J., Elliott, K., and **Hanlon, C.** 2026. Effect of group size on estradiol dynamics, follicular development, and egg production in broiler breeder hens. International Poultry Scientific Forum. Atlanta, Georgia, USA.
5. Almendares, K., Quino, M., Quino, P., Dundur, N., Berger, M., McGuire, O., Davis, JD., Elliott, K., and **Hanlon, C.** 2026. Testosterone variation in Broiler Breeder Males: Role of Group Size, Female Exposure, Spiking, and Body Weight. International Poultry Scientific Forum. Atlanta, Georgia, USA.
6. Berganza, IM., **Hanlon, C.**, Cho, S., Starkey, CW., and Starkey, JD. 2026. Assessment of pet owner perceptions and purchase intent of insect-based pet treats and food. American Feed Industry Association Pet Food Conference. Atlanta, Georgia, USA.
7. McGuire, O., Ziezold, CJ., Rentsch, AK., Bédécarrats, GY., **Hanlon, C.** 2025. Evaluation of estradiol concentrations during sexual maturation in cage-free pullets synchronized with body weight and photostimulation. Poultry Science Association. Raleigh, North Carolina, USA.
8. Berger, M., McGuire, O., Quino, P., Almendares, K., Flack, B., Diehl, K., and **Hanlon, C.** 2025. Impact of feeding regimens during rearing on reproductive parameters in broiler breeder hens through sexual maturity. Poultry Science Association. Raleigh, North Carolina, USA.
9. Quino, M., Dundur, N., Alvarado, E., **Hanlon, C.**, and Baker-Cook, BI. 2025. Effect of time of day preference and male-male competition on broiler breeder mating behavior and fertility during the early production period. Poultry Science Association. Raleigh, North Carolina, USA.
10. Rentsch, AK., **Hanlon, C.**, and Bédécarrats, GY. 2025. Keel bone ossification and position change during puberty – An exploratory study. Poultry Science Association. Raleigh, North Carolina, USA
11. Rentsch, AK., **Hanlon, C.**, and Bédécarrats, GY. 2025. Body composition at onset of lay - Effects of growth trajectory and photostimulation on relative body fat in laying hen pullets. Poultry Science Association. Raleigh, North Carolina, USA
12. Hildenberger, D., Berger, M., Quino, P., Almendares, K., Ferreira, C., Flack, B., **Hanlon, C.**, Diehl, K. 2025. Vaginal swab lipid profiles of high and low fertility broiler breeder hens. Poultry Science Association. Raleigh, North Carolina, USA
13. Meisner, P., Berger, M., Ferreira, C., Flack, B., **Hanlon, C.**, Porter, TE., and Diehl, K. 2025. Lipid biomarkers associated with egg storage and early embryonic mortality in broiler breeder chickens. Poultry Science Association. Raleigh, North Carolina, USA
14. Rentsch, AK., Tremblay, K., Gautamadasa, S., **Hanlon, C.**, and Bédécarrats, GY. 2025. Coming of Age: Changes in Laying Hen Pullets' Fearfulness and Aggression. Congress of the International Society for Applied Ethology. Utrecht, Netherlands
15. Rentsch, AK., Halm, R., Gautamadasa, S., **Hanlon, C.**, and Bédécarrats, GY. 2025. Assessment of experimental feed restriction on frustration indicators and locomotion strategies in laying hen pullets. North American Regional Meeting of the International Society of Applied Ethology. Guelph, Ontario, Canada.
16. Sroda, LR., Davis, JD., Diehl, K., Edge, CM., Berger, M., Elliott, KEC., Flack, B., and **Hanlon, C.** 2025. Validation of a Photoelectric Sensor System to Detect Oviposition Timing in

- Individually Caged Broiler Breeder Hens. Auburn University Research Symposium. Auburn, Alabama, USA.
17. Rogers, JW., Hutson, BL., Rueda, MS., Davis, JD., Elliott, KEC., **Hanlon, C.**, Starkey, CW., and Starkey, JD. 2025. Thermal variation mediated modulation of muscle stem cell populations of pre- and peri-hatch broiler chickens. Auburn University Research Symposium. Auburn, Alabama, USA.
 18. Barberena, JJ., Banegas, JE., Rueda, MS., Davis, JD., Elliott, KEC., **Hanlon, C.**, Starkey, CW., and Starkey, JD. 2025. Effect of sub-optimal temperature during late-stage of incubation on broiler chicken body weight gain and breast muscle growth characteristics. Auburn University Research Symposium. Auburn, Alabama, USA.
 19. Meisner, P., Ferreira, C., **Hanlon, C.**, Berger, M., and Diehl, K. 2025. Lipid biomarkers associated with early embryonic mortality in broiler breeder chickens. Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) Annual Training Conference. Memphis, Tennessee, USA.
 20. Berger, M., Diehl, K, Flack, B., Quino, P., McGuire, O., Almendares, K., and **Hanlon, C.** 2025. Impact of feeding regimens during rearing on sperm quality and fertilization capacity of broiler breeder hens and roosters through sexual maturity. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 21. Almendares, K., Diehl, K., Flack, B., Berger, M., McGuire, O., Quino, P., and **Hanlon, C.** 2025. Impact of Restricted Feeding Regimens on the Fertility and Hatchability of Broiler Breeder Flocks. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 22. McGuire, O., Halm, R., Maaskant, S., Rentsch, A.K., Bédécarrats, G.Y., Baker-Cook, BI., and **Hanlon, C.** 2025. Effects of synchronizing body weight and photostimulation on cage-free pullets to maximize reproductive capacity. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 23. Quino, P., Quino, M., Berger, M., Almendares, K., McGuire, O., Dundar, N., Alvarado, E., Baker-Cook, BI, and **Hanlon, C.** 2025. The impact of group size and spiking on fertility and hatchability in broiler breeder flocks. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 24. Sroda, LR., Davis, JD., Diehl, K., Edge, CM., Berger, M., Elliott, KEC., Flack, B., and **Hanlon, C.** 2025. Validation of a Photoelectric Sensor System to Detect Oviposition Timing in Individually Caged Broiler Breeders. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 25. Barberena, JJ., Banegas, JE., Rueda, MS., Davis, JD., Elliott, KEC., **Hanlon, C.**, Starkey, CW., and Starkey, JD. 2025. Effect of thermal variation during late-stage incubation on broiler chicken body weight gain and *Pectoralis major* muscle growth characteristics. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 26. Rogers, JW., Hutson, BL., Rueda, MS., Davis, JD., Elliott, KEC., **Hanlon, C.**, Starkey, CW., and Starkey, JD. 2025. Effect of thermal variation during early-stage incubation on broiler chicken muscle satellite cell populations at transfer and hatch. International Poultry Scientific Forum. Atlanta, Georgia, USA.
 27. Sroda, LR., Davis, JD., Diehl, K., Edge, CM., Berger, M., Elliott, KEC., Flack, B., and **Hanlon, C.** 2025. Validating the Use of Infra-Red Sensors to Detect Oviposition Timing in Individually Caged Broiler Breeders. US Precision Livestock Farming Conference. Lincoln, Nebraska, USA.

28. Berger, M., Brady, K., Butler, L., Backstrom, K., Hunter, C., and Hanlon, C. 2024. Impact of feeding regimens during rearing on growth and sexual maturation in broiler breeder pullets and cockerels. Poultry Science Association. Louisville, KY, USA.
29. Backstrom, K., Berger, M., Quino Gutierrez, M., Baker-Cook, BI., and Hanlon, C. Impact of high and low growth trajectories prior to photostimulation on reproductive parameters of broiler breeder pullets and cockerels. Poultry Science Association. Louisville, KY, USA.
30. Quino Gutierrez, M., Hanlon, C., and Baker-Cook, BI. 2024. Environmental enrichment preferences of broiler breeders during the rearing phase. Poultry Science Association. Louisville, KY, USA.
31. Riggs, M., Reina, M., Urrutia, A., Figueroa, J., Jackson, A., Hughes, M., True, B., **Hanlon, C.**, Hauck, R., Baker-Cook, BI., and Bourassa, DV. 2023. Analysis of broiler chicken blood parameters during carbon dioxide gas stunning. International Poultry Scientific Forum. Atlanta, Georgia, USA.
32. Riggs, M., **Hanlon, C.**, Baker-Cook, BI., Jackson, A., Reina Antillon, MA., Figueroa, J., Hughes, M., and Bourassa, D. 2023. Analysis of broiler blood metabolites and corticosterone prior to and following electrical and controlled atmosphere stunning. Poultry Science Association Annual Meeting. Philadelphia, PA, USA.
33. Berger, MR., **Hanlon, C.**, Long, J., Brady, K. 2023. Turkey hen sperm storage tubule transcriptome response to the presence of semen. Poultry Science Association Annual Meeting. Philadelphia, PA, USA.
34. Jackson, A., Bourassa, DV., **Hanlon, C.**, and Baker-Cook, BI. 2023. Assessing the impact of head removal following cervical dislocation on latency to insensibility and death. European Symposium on Poultry Welfare. Prague, Czech Republic.
35. Riggs, M., Reina, M., Urrutia, A., Figueroa, J., Jackson, A., Hughes, M., True, B., **Hanlon, C.**, Hauck, R., Baker-Cook, BI., and Bourassa, DV. 2023. Analysis of broiler chicken blood parameters during carbon dioxide gas stunning. International Poultry Scientific Forum. Atlanta, Georgia, USA.
36. Hanlon, C., Takeshima, K., Bahry, M., and Bédécarrats, G.Y. 2022. Impact of Growth and Body Weight on Sexual Maturation in Layer Pullets. International Symposium on Avian Endocrinology. Scotland, Edinburgh.
37. Bédécarrats, G.Y., Hanlon, C., and Bahry, M. 2022. GnIH, a possible switch between growth and reproduction. International Symposium on Avian Endocrinology. Scotland, Edinburgh.
38. Bahry, M., Hanlon, C., Schaus, S., Ziezold, C and Bédécarrats, G.Y. 2022. Impact of rearing environments on growth trajectories and sexual maturation in layer chickens. Poultry Science Association, San Antonio, Texas, United States.
39. Bahry, M., Hanlon, C., Schaus, S., Ziezold, C and Bédécarrats, G.Y. 2022. Impact of rearing environments on growth trajectories and sexual maturation in layer chickens. Canadian Poultry Research Forum, Virtual.
40. Bahry, M., Hanlon, C., Schaus, S., and Bédécarrats, G.Y. 2021. Impact of growth trajectory on sexual maturation in layer chickens. Poultry Science Association, Virtual.
41. Hanlon, C. and Bédécarrats, G.Y. 2021. The Impact of Genetic Selection of Commercial Layers on the Control of the Hypothalamic-Pituitary Gonadal Axis. Canadian Poultry Research Forum, Virtual.
42. Bahry, M., Hanlon, C., Schaus, S., and Bédécarrats, G.Y. 2021. Impact of growth trajectory on sexual maturation in layer chickens. Canadian Poultry Research Forum, Virtual.

43. Ziezold, C., Durbridge, N., Hanlon, C., and Bédécarrats, G.Y. 2021. Effect of Red Spectrum Lighting on Female Commercial Turkey Breeder Performance. Canadian Poultry Research Forum, Virtual.
44. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2020. Bone and Eggshell Quality Through an Extended Laying Cycle in Three Differentially Selected Strains of Laying Hens. Poultry Science Association, Virtual.
45. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2019. Are the differences in sexual maturation observed between layers with different degrees of genetic selection mediated via the pituitary gland? Poultry Science Association, Montreal, Quebec, Canada.
46. Takeshima, K., Zuidhof, M., Hanlon, C., and Bédécarrats, G.Y. 2019. Differential effects of constant supplemental light wavelength on plasma estradiol and melatonin, body weight, and egg production in female broiler breeders. Poultry Science Association, Montreal, Quebec, Canada.
47. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2018. Impact of genetic selection on laying persistency and the hypothalamic-pituitary gonadal axis. Southern Ontario Reproductive Biology Conference. Guelph, Ontario, Canada.
48. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2018. Physiological impact of genetic selection for laying persistency. Poultry Science Association, San Antonio, Texas, United States.
49. Takeshima, K., Zuidhof, M., Hanlon, C., and Bédécarrats, G.Y. 2018. Effect of daytime and supplemental light spectrum on reproduction of broiler breeder hens. Southern Ontario Reproductive Biology Conference. Guelph, Ontario, Canada.
50. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2017. Alterations in sexual maturation and production parameters across three differentially selected strains of laying hens. Poultry Service Industry Workshop (PSIW), Banff, Alberta, Canada.
51. Hanlon, C., Takeshima, K., and Bédécarrats, G.Y. 2017. Alteration of sexual maturation across three differentially selected strains of laying hens. Poultry Science Association, Orlando, Florida, United States.
52. Takeshima, K., Zuidhof, M., Hanlon, C., Rodriguez, A., and Bédécarrats, G.Y. 2017. Growth and reproductive performances of broiler breeder hens under different daytime and supplemental light spectrum. Poultry Science Association, Orlando, Florida, United States
53. Rodriguez, A., Zuidhof, M., Hanlon, C., Sparling, B., and Bédécarrats, G.Y. 2016. Effects of main and supplemental light spectrum on broiler breeder growth and maturation. Poultry Science Association, New Orleans, Louisiana, United States.
54. Takeshima, K., Heuthorst, A., Sparling, B., Hanlon, C., Rodriguez, A., and Bédécarrats, G.Y. 2016. Does spectrum lighting affect layer pullets' growth and subsequent production? Poultry Science Association, New Orleans, Louisiana, United States.

Presentations and Invited Seminars

1. Broiler Breeder Lighting: Shedding Light on the Bird's Perspective. National Poultry Technology Center (NPTC) Hands-on Spring Basics Course. Auburn, AL. 2025.
2. Broiler Breeder Lighting: Shedding Light on the Bird's Perspective. National Poultry Technology Center (NPTC) Hands-on Winter Basics Course. Auburn, AL. 2024.
3. Broiler Breeder Lighting: Shedding Light on the Male Perspective. Ontario Broiler Chicken Hatching Egg Producers Association (OBCHEPA) Education Evening. Stratford, ON. 2024.

4. Breeder Reproduction. Maple Lodge Broiler Breeder Research Seminar. Beamsville, ON. 2023.
5. Impact of Growth and Body Weight on Sexual Maturation in Layer Pullets. International Symposium on Avian Endocrinology in Scotland, Edinburgh. 2022.
6. Impact of rearing environments on growth trajectories and sexual maturation in layer chickens. Poultry Science Association in San Antonio, Texas. 2022.
7. The Impact of Genetic Selection of Commercial Layers on the Control of the Hypothalamic-Pituitary Gonadal Axis. Canadian Poultry Research Forum. Hosted by the Poultry Innovations Partnership (Virtual). 2021.
8. Bone and Eggshell Quality Through an Extended Laying Cycle in Three Differentially Selected Strains of Laying Hens. Poultry Science Association (Virtual) in Louisville, Kentucky, United States. July 2020.
9. Are the differences in sexual maturation observed between layers with different degrees of genetic selection mediated via the pituitary gland? Poultry Science Association in Montreal, Quebec, Canada. July 2019.
10. Physiological impact of genetic selection for laying persistency. Poultry Science Association in San Antonio, Texas, United States. July 2018.
11. Impact of genetic selection on laying persistency and the hypothalamic-pituitary gonadal axis. Southern Ontario Reproductive Biology Conference. May 2018.
12. Intensive genetic selection of commercial laying hens has impacted the control of the reproductive axis. Hendrix Genetics Academy in Montreal, Quebec, Canada. October 2017.
13. Alterations in sexual maturation and production parameters across three differentially selected strains of laying hens. Poultry Service Industry Workshop (PSIW) in Banff, Alberta, Canada. October 2017.
14. Alterations of sexual maturation across three differentially selected strains of laying hens. Poultry Science Association in Orlando, Florida, United States. July 2017.
15. Spectrum Lighting and Egg Laying. Poultry Health Research network (PHRN) day for the Emsland-Frischgefluegel Poultry company at the University of Guelph, Ontario, Canada. December 2016.
16. The Impact of Intensive Genetic Selection of Commercial Laying Hens on the Control of the Reproductive Axis. Arkell Research Poultry and Equine Research Station at the University of Guelph, Ontario, Canada. November 2016.
17. The Impact of Intensive Genetic Selection of Commercial Laying Hens on the Control of the Reproductive Axis. Centre for the Genetic Improvement in Livestock (CGIL) seminar series at the University of Guelph, Ontario, Canada. November 2016.

Grants

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1. Reproductive Success of Broiler Breeders: Investigating the Relationship Between Metabolic Tissues, Neuroendocrine Regulation, and Sexual Maturation. 2026. **Hanlon, C.** and Diehl, K. \$299,876. (PI)
 2. Effects Of Environmental Conditions in Live Production on Production Efficiency & Product Quality in Commercial Poultry. 2025. Davis, JD., **Hanlon, C.**, Linhoss, J., and Edge, C. USDA-ARS Cooperative Agreement. \$1,094,560. (Co-PI)

3. Lipidomic profiling to address fertility and hatchability challenges in broiler breeders. 2024. **Hanlon, C.** AU College of Agriculture AgSEED Program. \$49,979.15. (PI).
4. Effects Of Environmental Conditions in Live Production on Production Efficiency & Product Quality in Commercial Poultry. 2024. Davis, JD., **Hanlon, C.**, Starkey., JD., Linhoss, J., Baker-Cook., BI., Campbell, J., and Edge, C. USDA-ARS Cooperative Agreement. \$1,287,718. (Co-PI)
5. Impact of body weight, age and strain on keel bone health and sexual maturity in layer pullets raised in commercial cage-free housing systems. 2024. Bédécarrats, G.Y., **Hanlon, C.**, Rentsch, A. \$80,000. (Co-PI).
6. The impact of feeding programs on the reproductive capacity and mating success of broiler breeder males and females. 2023. **Hanlon, C.**, and Brady, K. Cobb Research Initiative. \$244,175. (PI)
7. Effects Of Environmental Conditions in Live Production on Production Efficiency & Product Quality in Commercial Poultry. 2023. Davis, JD., **Hanlon, C.**, Starkey., JD., Linhoss, J., Baker-Cook., BI., and Edge, C. USDA-ARS Cooperative Agreement. \$1,287,718. (Co-PI)
8. Investigation into the Contributions of Rooster Hens, and Social Dynamics on the Reduced Hatchability in Broiler Breeders. Baker-Cook, BI, and **Hanlon, C.** US Poultry & Egg Association. \$124,976. (PI)
9. The impact of synchronizing photoperiod with body weight and metabolic thresholds to optimize sexual maturation in cage-free layers. 2023. **Hanlon, C.**, Bédécarrats, GY., and Baker-Cook, BI. Egg Industry Center. \$109,600. (PI)
10. The impact of synchronizing photoperiod with body weight and metabolic thresholds to optimize sexual maturation in cage-free layers. 2023. Bédécarrats, GY., **Hanlon, C.**, and Baker-Cook, BI. Egg Farmers of Canada. \$60,000. (Co-PI)

Professional Affiliations

World Poultry Science (Canada Branch)	2021 – Present
Poultry Science Association (PSA)	2015 – Present
International Society for Avian Endocrinology (ISAE)	2015 – Present
North American Representative on the Scientific Committee	

Professional Service Activities

Reviewer, Poultry Science	2020 - present
Reviewer, Frontiers	2021 - present
Reviewer, USDA-NIFA Grant Panel	2024
Reviewer, Journal of Applied Poultry Science	2023 - present
Section Chair, Poultry Science	2025

University Service

Auburn University	
Lifetime and Young Alumni Achievement Award Selection Committee	2025 – present
Auburn University, College of Agriculture	
Scholarship Committee	2022 – present

Auburn University, Poultry Science

Farm Committee	2022 – present
Faculty Search Committees	2022 – present
Teaching Committee	2022 – present
Recruitment Committee	2022 – present
Scholarship Committee, Chair	2022 – present

University of Guelph

Animal Bioscience Graduate Student Council Co-Chair	2015- 2019
Animal Bioscience Graduate Committee	2016- 2020
Animal Physiology Faculty Search Committee	2017- 2018
International Symposium on Avian Endocrinology Organizing Committee	2016
Poultry Club, University of Guelph	2014- 2019

Honors and Awards

W.R. Graham Memorial Award	2019
Outstanding Service Prize	2019
Ontario Graduate Scholarship (OGS)	2018
Animal Bioscience Leadership Scholarship	2018
Robb Graduate Travel Grant	2018
Craig Hunter Poultry Science Graduate Scholarship	2017
Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST)	2017
Poultry Service Industry Workshop (PSIW) Scholarship	2017
Canadian Poultry Research Council (CPRC) Scholarship	2016
Craig Hunter Poultry science Graduate Scholarship	2016
Graduate Tuition Scholarship (GTS) Award	2015

Advisee Awards

Certificate of Excellence (Oral Presentation) at the Poultry Science Association Meeting. Olivia McGuire.	2025
Poultry Science Association Travel Award. Madison Berger.	2025
Poultry Science Association Travel Award. Olivia McGuire.	2025
S. Allen Edgar Endowed Graduate Scholarship. Madison Berger.	2025
Auburn University Undergraduate Research Student Employee of the Year. Kaleigh Backstrom.	2024

Extension

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- Poultry Health Research Network (PHRN) YouTube Series: Jan 2020
 - Canadian Poultry Magazine Interview (2019). “Early Maturation in Laying Hens” By Lilian Schaefer
 - Hatchery 101. Coopstastic. Alabama 4H Center. Columbiana, AL. 2023.
 - Department of Poultry Science Junior Summer Camps Hatching Demonstration. Auburn, AL. 2023.

- Community College visits with the Department of Poultry Science Student Recruiter. 2023
- Breeder Reproduction. Maple Lodge Broiler Breeder Research Seminar. Beamsville, ON. 2023.
- Broiler Breeder Lighting: Shedding Light on the Bird's Perspective. National Poultry Technology Center (NPTC) Hands-on Winter Basics Course. Auburn, AL. 2024.
- Broiler Breeder Lighting: Shedding Light on the Male Perspective. Ontario Broiler Chicken Hatching Egg Producers Association (OBCHEPA) Education Evening. Stratford, ON. 2024.
- Interview and Tour of the Miller Center for video and print media for Bham Now. 2024.
- Spotlight on Alabama Agriculture Interview for Alabama Public Television. 2024.
- Miller Center tours for the Poultry Science Freshmen student open house. 2024.
- Community College visits with the Department of Poultry Science Student Recruiter. 2024.
- Department of Poultry Science Junior Summer Camps Hatching Demonstration. Auburn, AL. 2024.
- Department of Poultry Science Senior Summer Camps Hatching Demonstration. Auburn, AL. 2024.
- Department of Poultry Science Booth at the Alabama National Fair. Montgomery, AL. 2024.
- Hatchery Management and Embryo Development. Department of Poultry Science Ag Teacher Workshops. 2024.
- Reproductive Physiology. Department of Poultry Science Ag Teacher Workshops. 2024.
- Miller Center tours for the Poultry Science Freshmen student open house. 2025.
- Department of Poultry Science Junior Summer Camps Hatching Demonstration. Auburn, AL. 2025.
- Department of Poultry Science Senior Summer Camps Hatching Demonstration. Auburn, AL. 2025.